Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Federally Enforceable District Origin Operating Permit (FEDOOP)

Permit No.: O-0846-19-F Plant ID: 0846

Effective Date: 11/07/2019 Expiration Date: 11/30/2024

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Source: The Standard Group, LLC
2415 Plantside Drive
Louisville, KY 40299

Owner: The Standard Group, LLC
2415 Plantside Drive
Louisville, KY 40299

The applicable procedures of District Regulation 2.17 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than twelve months and no later than ninety days prior to the expiration date.

Emission limitations to qualify for non-major status:

Pollutant: VOC
Tons/year: 25

Application No.: See **Application and Related Documents** table.
Public Notice Date: 10/03/2019

Permit writer: Aaron DeWitt

Air Pollution Control Officer
11/7/2019

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Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
29111-14-F	08/09/2014	09/18/2014	Initial	Initial FEDOOP Permit Issuance
29111-14-F (R1)	09/12/2017	10/26/2017	Signif.	Update General Condition 10 to remove GHG.
			Admin.	Company name change. Permit format update. Update equipment list for U3 per 6/27/2017 permit application
O-0846-19-F	10/03/2019	11/07/2019	Renewal	Permit renewal

Construction Permit Summary

Permit No.	Issue Date	Description
267-93-C	3/30/1993	One (1) six-color offset lithographic press (MIEHLE – Super Sixty)
76-96-C	3/30/1996	One (1) seven-color sheet fed printing press (Mitsubishi, SFC-70)
149-01-C	5/21/2001	One (1) seven-color sheet fed printing press (Mitsubishi, SFC-7D)
98-06-C	4/30/2006	One (1) lithographic press (Mitsubishi, 6HC-7)
99-06-C	4/30/2006	Ten (10) folder/gluers
88-09-C	5/31/2009	One (1) eight-color sheet fed lithographic printing press (Mitsubishi, V3000LX-8-CDIS-U-R)
170-09-C	8/31/2009	One (1) cutting press (BOBST, Expertcut 106 LER)
34375-12-C	3/6/2012	One (1) six-color sheet fed lithographic press (Mitsubishi, D1000LS)
35691-12-C	8/15/2012	One (1) six-color sheet fed lithographic press (Mitsubishi, V3000LX-g-DI-C-SMX)

Application and Related Documents

Document Number	Date	Description
21664	3/6/2019	FEDOOP Renewal Application Question and Answer
22446	4/30/2019	FEDOOP Expiration Reminder for 29111-14-F (R1)
23005	6/13/2019	District reminder that applications due by July 1, 2019
23016	6/13/2019	Standard questions of required application forms
23017	6/13/2019	District response to questions of required application forms
2823	7/16/2019	District request to submit applications
2938	7/19/2019	Standard to be in touch regarding applications the following week
2933	7/19/2019	Standard submittal of application 100a
2973	7/22/2019	District request to confirm application details and submit with date of submission if correct
2974	7/22/2019	Standard submission of complete 100b forms
2976	7/22/2019	Standard to submit each 100b and 100p individually
2977	7/22/2019	U1 100b
2978	7/22/2019	U2 100b
2979	7/22/2019	U3 100b
2980	7/22/2019	100p

Abbreviations and Acronyms

AP-42	- AP-42, *Compilation of Air Pollutant Emission Factors, published by U.S.EPA*
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO_x	- Nitrogen oxides
PM	- Particulate Matter
PM_{10}	- Particulate Matter less than 10 microns
$PM_{2.5}$	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO_2	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

G1. The owner or operator shall comply with all General Conditions herein and all terms and conditions in the referenced process/process equipment list.

G2. All terms and conditions in this FEDOOP are enforceable by EPA, except those terms and conditions specified as District-only enforceable, and those which are not required pursuant to the Clean Air Act Amendments of 1990 (CAAA) or any of the Act's applicable requirements.

G3. All application forms, reports, compliance certifications, and other relevant information submitted to the District shall be certified by a responsible official. If a change in the responsible official (RO) occurs during the term of this permit, or if an RO is added, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of such change or addition.

G4. The owner or operator shall submit an annual compliance certification, signed by the responsible official, to the District, on or before April 15 of the year following the year for which the certification applies. This certification shall include completion of District Form 9440-O.

G5. Periodic testing, instrumental monitoring, or non-instrumental monitoring, which may include record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstrating continuing compliance with the terms and conditions of this permit.

G6. The owner or operator shall retain all records required by the District or any applicable requirement, including all required monitoring data and supporting information, for a period of five years from the date of the monitoring, sampling, measurement, report, or application, unless a longer time period for record retention is required by the District or an applicable requirement. Records shall be retrievable within a reasonable time and made available to the District, Kentucky Division for Air Quality, or the EPA upon request.

G7. The owner or operator shall provide written notification to the District, and receive approval, prior to making any changes to existing equipment or processes that would result in emissions of any regulated pollutant in excess of the allowable emissions specified in this permit.

G8. This permit may be reissued, revised, reopened, or revoked pursuant to District Regulation 2.17. Repeated violations of permit conditions are sufficient cause for revocation of this permit. The filing of a request by the owner or operator for any reissuance, revision, revocation, termination, or a notification of planned changes in equipment or processes, or anticipated noncompliance shall not alter any permit requirement.

G9. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed either 10 tons per year, or such lesser quantity as the EPA has established by rule, of any one Hazardous Air Pollutant (HAP) or 25 tons per year of all HAPs combined. Fugitive HAP emissions shall be included in this limit. HAPs are listed in section 112(b) of the CAAA and as amended in 40 CFR 63, Subpart C.

G10. Except as otherwise specified or limited herein, the owner or operator shall not allow or cause the emissions to equal or exceed 100 tons per year of any regulated pollutant, including particulate matter, PM_{10}, $PM_{2.5}$, sulfur dioxide, carbon monoxide, nitrogen oxides, lead, hydrogen sulfide, gaseous fluorides, total fluorides, or Volatile Organic Compounds (VOC); any pollutant subject to any standard in District Regulation 7.02; or any substance listed in sections 112(r), 602(a) and 602(b) of the CAAA. Fugitive emissions shall be included in these limits for source categories listed in District Regulation 2.16.

G11. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.

G12. Unless specified elsewhere in this permit, the owner or operator shall submit semi-annual reports demonstrating compliance with the emission limitations specified. The report shall contain monthly and consecutive 12-month totals for each pollutant that has a federally enforceable limitation on the potential to emit. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. All compliance reports shall include the following per Regulation 2.17, section 3.5.

- A certification statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete", and
- The signature and title of a responsible official of the company.

- The semi-annual compliance reports are due on or before the following dates of each calendar year:

Reporting Period	**Report Due Date**
January 1 - June 30	August 29
July 1 - December 31	March 1 of the following year

G13. The owner or operator shall comply with all applicable requirements of the following federally enforceable District Regulations:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards and Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.06	Permit Requirements – Other Sources
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

G14. The owner or operator shall comply with all applicable requirements of the following District-only enforceable regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
2.17	Federally Enforceable District Origin Operating Permits
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

G15. The owner or operator shall submit emission inventory reports, as required by Regulation 1.06, if so notified by the District.

G16. The owner or operator shall submit timely reports of abnormal conditions or operational changes that may cause excess emissions, as required by Regulation 1.07.

G17. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit shall be submitted to:

Air Pollution Control District
701 W. Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

Plantwide Requirements

Facility Description

Standard Group prints paperboard packaging using lithographic printing press lines, cutting presses and folder/gluers.

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.17	Federally Enforceable District Origin Operating Permits	1 through 9

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.00	Definitions	1, 2
5.01	General Provisions	1 through 2
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6
STAR regulations are 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23		

Plantwide Specific Conditions

S1. Standards
[Regulation 2.17, section 5.1]

a. VOC

i. The owner or operator shall not allow or cause total plantwide VOC emissions to equal or exceed 25 tons during any consecutive 12-month period.[1] [Regulation 2.17, section 5.1; Regulation 5.00, section 1.13.5.1]

S2. Monitoring and Record Keeping
[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. VOC

i. The owner or operator shall, monthly, calculate and record the plantwide total emissions of VOC for the previous consecutive 12-month period.

S3. Reporting
[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. VOC

i. The owner or operator shall report the consecutive 12-month plantwide total emissions of VOC for each month in the reporting period.

ii. The owner or operator shall identify any periods of exceeding a VOC emission standard during the reporting period. If no exceedances occur during the reporting period, the report shall contain a negative declaration.

[1] On 04/21/2014, the source requested this limit for VOC to qualify as FEDOOP STAR Exempt as defined by Regulation 5.00, section 1.13.5.

Emission Unit U1: Lithographic printing presses

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	All

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E1	One (1) eight-color lithographic printing press, make Mitsubishi, model V3000LX-8-C-DIS-UR, capacity 16,000 sheets/hr, equipped with a fountain solution cooling system and an associated electric dryer. (Equipment ID: 21)	2009	7.25	N/A	S1
E4	One (1) seven-color lithographic printing press, make Mitsubishi, model 6HC-7, capacity 10,000 sheets/hr. (Equipment ID: 27)	2006	7.25	N/A	S4

Control Devices

There are no control devices associated with this equipment.

U1 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. VOC

i. The owner or operator shall not allow or cause the VOC emissions from emission point E1 to equal or exceed 10 tons during any consecutive 12-month period.[2]
[Construction Permit 88-09-C, effective date 5/31/2009]

ii. The owner or operator shall not allow or cause the VOC emissions from emission point E4 to equal or exceed 25 tons during any consecutive 12-month period.[2]
[Construction Permit 98-06-C, effective date 4/30/2006]

iii. For emission point E1: The District has determined that compliance with the VOC requirements specified in Table "U1 Ink Material VOC Content Requirements (BACT)" represents Best Available Control Technology (BACT). [Regulation 2.03, section 5.1; Regulation 7.25, section 3] (BACT)
[Construction Permit 88-09-C, effective date 5/31/2009]

Table 1- U1 Ink Material VOC Content Requirements (BACT)

Raw Material	BACT Limit
Conventional Inks	5% by weight VOC
Specialty Inks	25% by weight VOC 10% of total ink usage
Fountain Solution	5% by weight VOC as applied; Alcohol substitutes only; Chilled Fountain Solution
Blanket Wash	25% by weight VOC as applied or vapor pressure ≤ 10 mmHg at 68°F
Roller Wash	25% by weight VOC as applied or vapor pressure ≤ 10 mmHg at 68°F
Water-based Coatings (Aqueous)	1.0 lb VOC/gal as applied
Any other solvents not listed above that are used to manually clean press components	25% by weight VOC as applied or vapor pressure ≤ 5 mmHg at 68°F

[2] This ton per year limit includes emissions from the usage of raw materials listed in Table 1 as well as any other raw materials containing VOC that are not listed. These materials include but are not limited to: plate developer, coatings that are part of the inks, plate gum, blanket fix, silicon spray, and SMK-OD etching solution.

iv. The owner or operator shall maintain the temperature at or below 60°F for each fountain solution reservoir. [Regulation 7.25, section 3] (BACT)
[Construction Permit 88-09-C, effective date 5/31/2009; and 98-06-C, effective date 4/30/2006]

v. The owner or operator shall use the least amount of VOC-containing material needed for the job. [Regulation 7.25, section 3] (BACT)

vi. The owner or operator shall store all VOC-containing materials in closed containers when not in use. This includes materials such as inks, solvents, fountain solution, press cleaning materials, and waste materials including rags/wipes/paper used to clean press components.
[Regulation 7.25, section 3] (BACT)

vii. The owner or operator shall clean up all spills of any VOC-containing materials no matter how small it is. If the spill is significant (i.e. more than one gallon), the owner or operator shall notify maintenance or professional for assistance. [Regulation 7.25, section 3] (BACT)

viii. See Plantwide Emission Unit.

S2. Monitoring and Record Keeping
[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. VOC

i. The owner or operator shall, monthly, calculate and record the total VOC emissions from emission point E1 for the previous consecutive 12-month period.

(1) For emission point E1:

(a) The owner or operator shall, monthly, maintain records of the name, quantity used, and VOC content for each of the following raw materials: inks, fountain solution concentrate, fountain solution additive, blanket wash, roller wash, press cleaning materials, and any other VOC containing material used during each calendar month.

(b) The owner or operator shall, monthly, record the total amount used of each raw material.

(c) To demonstrate compliance with the VOC content requirements, the owner or operator shall, monthly, maintain records that show the quantity (in pounds) of specialty inks used during each calendar month and calculate the percentage of the total inks used that are classified as specialty inks as determined on a consecutive 12-month basis.

(d) The owner or operator shall determine the VOC content (as applied) of each batch of press-ready fountain solution by one of the following methods:

(i) The owner or operator shall determine the VOC content of each batch of press-ready fountain solution by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any deviation form the standard fountain solution makeup. Any manual additions of VOC made after each fountain solution batch is prepared shall be documented and the VOC content of the fountain solution shall be calculated to demonstrate compliance with the as applied fountain solution standard. Documentation of any deviations or manual additions shall include the date and time of occurrence.

(ii) Alternatively, a sample of the fountain solution (as applied) may be taken from the fountain solution tray or reservoir and measured with a hydrometer, refractometer, or conductivity meter. Within 30 days after the effective date of this permit, the owner or operator shall establish the appropriate compliance indicator ranges for each of the analytical methods above that the source will use to demonstrate compliance with the fountain solution VOC content (as applied). Upon District approval of the established compliance indicator ranges, the owner or operator shall analyze the VOC content of each fresh batch of press ready fountain solution as prepared and after each addition of a VOC containing material to the fountain solution reservoir made following a fresh batch of fountain solution prepared. The owner or operator shall maintain daily records of the results of each observed reading including the date, time, and the name of the person who observed the reading.

(e) The owner or operator of a lithographic press using automatic cleaning equipment (e.g. blanket washers) that mixes the cleaning solution at the point of application and who must demonstrate the cleaning solution (as applied) complies with the VOC content requirements shall:

(i) Operate, maintain, and calibrate the automatic feed equipment to regulate the volume of each cleaning solvent and water (or other non-VOC), as mixed; and

(ii) Preset the automatic feed equipment so that the consumption rates of the cleaning solvents and water (or other non-VOC), as applied, comply with the VOC content requirements.

(f) For each batch of blanket wash, roller wash, or other cleaning solution not prepared with automatic equipment, the VOC content of the cleaning solution (as applied) shall be determined by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any additions of VOC or deviations from the standard cleaning solution makeup including the date and time of occurrence.

ii. The owner or operator shall, monthly, calculate and record the total VOC emissions from emission point E4 for the previous consecutive 12-month period.

(1) For emission point E4:

(a) The owner or operator shall, monthly, maintain records of the name, quantity used, and VOC content for each of the following raw materials: inks, fountain solution concentrate, fountain solution additive, blanket wash, roller wash, press cleaning materials, and any other VOC containing material used during each calendar month.

(b) The owner or operator shall, monthly, record the total amount used of each raw material.

(c) To demonstrate compliance with the VOC content requirements, the owner or operator shall, monthly, maintain records that show the quantity (in pounds) of specialty inks used during each calendar month and calculate the percentage of the total inks used that are classified as specialty inks as determined on a consecutive 12-month basis.

(d) The owner or operator shall determine the VOC content (as applied) of each batch of press-ready fountain solution by one of the following methods:

(i) The owner or operator shall determine the VOC content of each batch of press-ready fountain solution by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any deviation form the standard fountain solution makeup. Any manual additions of VOC made after each fountain solution batch is prepared shall be documented and the VOC content of the fountain solution shall be calculated to demonstrate compliance with the as applied fountain solution standard. Documentation of any deviations or manual additions shall include the date and time of occurrence.

(ii) Alternatively, a sample of the fountain solution (as applied) may be taken from the fountain solution tray or reservoir and measured with a hydrometer, refractometer, or conductivity meter. Within 30 days after the effective date of this permit, the owner or operator shall establish the appropriate compliance indicator ranges for each of the analytical methods above that the source will use to demonstrate compliance with the fountain solution VOC content (as applied). Upon District approval of the established compliance indicator ranges, the owner or operator shall analyze the VOC content of each fresh batch of press ready fountain solution as prepared and after each addition of a VOC containing material to the fountain solution reservoir made following a fresh batch of fountain solution prepared. The owner or operator shall maintain daily records of the results of each observed reading including the date, time, and the name of the person who observed the reading.

(e) The owner or operator of a lithographic press using automatic cleaning equipment (e.g. blanket washers) that mixes the cleaning solution at the point of application and who must demonstrate the cleaning solution (as applied) complies with the VOC content requirements shall:

(i) Operate, maintain, and calibrate the automatic feed equipment to regulate the volume of each cleaning solvent and water (or other non-VOC), as mixed; and

(ii) Preset the automatic feed equipment so that the consumption rates of the cleaning solvents and water (or other non-VOC), as applied, comply with the VOC content requirements.

(f) For each batch of blanket wash, roller wash, or other cleaning solution not prepared with automatic equipment, the VOC content of the cleaning solution (as applied) shall be determined by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any additions of VOC or deviations from the standard cleaning solution makeup including the date and time of occurrence.

iii. To demonstrate compliance with the fountain solution temperature requirements, the owner or operator shall use a thermometer or other temperature detection device capable of reading to within 2.0° F to measure and record the temperature of each fountain solution reservoir once per day for each operating day and keep daily records of the temperature.

iv. The owner or operator shall maintain a copy of the material safety data sheet (MSDS/SDS) for each VOC containing material used at this plant.

v. See Plantwide Emission Unit.

S3. Reporting
[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. VOC

i. The owner or operator shall report the VOC emissions from emission point E1 for the previous consecutive 12-month period for each month.

ii. The owner or operator shall report the VOC emissions from emission point E4 for the previous consecutive 12-month period for each month.

iii. Identification of all periods of exceeding a VOC emission limit or standard specified, including the quantity of excess emissions. If no excess VOC emissions occur during a reporting period, the owner or operator shall submit a negative declaration.

iv. See Plantwide Emission Unit.

U1 Comments

1. The following table summarizes the compliance monitoring methods to reasonably assure compliance with District regulations and the terms and conditions of this permit:

Table 2 – Compliance Monitoring Methods

Pollutant	Monitoring	Record Keeping	Frequency
VOC	Raw material usage	Record the monthly usage or each VOC containing material	Monthly
	Emissions	Calculate and record the calendar month and rolling 12-month total VOC emissions	Monthly
	Fountain solution temperature	Record the temperature of each fountain solution reservoir	Daily
	Fountain solution VOC content	Determine VOC content (as applied) of each batch of fountain solution	As required
	Raw material VOC content	Maintain a copy of the MSDS for each VOC containing material used	Continuous

Emission Unit U2: Lithographic printing presses

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	All

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E2	One (1) six-color lithographic sheet-fed Non-heatset printing press, make Mitsubishi, model V3000LX-g-DI-C-SMX, capacity 16,000 sheets/hr, equipped with a Grafix G56 electric dryer. (Equipment ID: 22)	2012	7.25	N/A	S2
E3	One (1) six-color lithographic sheet-fed Non-heatset printing press, make Mitsubishi, model D1000LS, capacity 15,000 sheets/hr. (Equipment ID: 20)	2012	7.25	N/A	S3

Control Devices

There are no control devices associated with this equipment.

U2 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. VOC

i. The owner or operator shall not allow or cause the VOC emissions from emission point E2 to equal or exceed 16 tons during any consecutive 12-month period.[3]
[Construction Permit 35691-12-C, effective date 8/15/2012]

ii. The owner or operator shall not allow or cause the VOC emissions from emission point E3 to equal or exceed 9 tons during any consecutive 12-month period.[3]
[Construction Permit 34375-12-C, effective date 3/6/2012]

iii. The District has determined that compliance with the VOC requirements specified in Table "U2 Ink Material VOC Content Requirements (BACT)" represents Best Available Control Technology (BACT).
[Regulation 2.03, section 5.1; Regulation 7.25, section 3] (BACT)
[Construction Permit 35691-12-C, effective date 8/15/2012 and 34375-12-C, effective date 3/6/2012]

Table 2- U2 Ink Material VOC Content Requirements (BACT)

Raw Material	BACT Limit
Conventional Inks[4]	18% by weight VOC
Specialty Inks (including, but are not limited to, metallic, magnetic, fluorescent, and iridescent inks)	25% by weight VOC 10% of total ink usage
UV Inks	3% by weight VOC
Fountain Solution	Non-Vinyl: 5% by weight VOC as applied; Or 8.5% by weight if Chilled Fountain Solution at 60°F max.; Vinyl or Plastic Sheets: 10% by weights as applied
Blanket Wash	25% by weight VOC as applied or vapor pressure ≤ 10 mmHg at 68°F

[3] This ton per year limit includes emissions from the usage of raw materials listed in Table 2 as well as any other raw materials containing VOC which are not listed. These materials include but are not limited to: plate developer, coatings that are part of the inks, plate gum, blanket fix, silicon spray, and SMK-OD etching solution.

[4] Per EPA guidance document for Lithographic Printing and Letterpress Printing dated September 2006, the document defies varnishes as un-pigmented offset lithography inks, and therefore are to be included in the conventional ink category.

Raw Material	BACT Limit
Roller Wash	25% by weight VOC as applied or vapor pressure ≤ 10 mmHg at 68°F
Water-based Coatings (Aqueous)	1.0 lb VOC/gal as applied

iv. The owner or operator shall use the least amount of VOC containing materials needed for the job. [Regulation 7.25, section 3] (BACT) [Construction Permit 35691-12-C, effective date 8/15/2012; 34375-12-C, effective date 3/6/2012]

v. The owner or operator shall store all VOC containing materials in closed containers when not in use. This includes materials such as inks, solvents, fountain solution, press cleaning materials, and waste materials including rags/wipes/paper used to clean press components. [Regulation 7.25, section 3] (BACT) [Construction Permit 35691-12-C, effective date 8/15/2012; 34375-12-C, effective date 3/6/2012]

vi. The owner or operator shall clean up all spills of any VOC containing materials no matter how small it is. If the spill is significant (i.e. more than one gallon), the owner or operator shall notify maintenance or professionals for assistance. [Regulation 7.25, section 3] (BACT) [Construction Permit 35691-12-C, effective date 8/15/2012; 34375-12-C, effective date 3/6/2012]

vii. See Plantwide Emission Unit.

S2. Monitoring and Record Keeping
[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. VOC

i. The owner or operator shall, monthly, maintain records of the name, quantity used, and VOC content for each of the following raw materials: inks, blanket wash, roller wash, aqueous coatings, or any other VOC containing material used during each calendar month.

ii. The owner or operator shall, monthly, calculate and record the total VOC emissions form emission point E2 for the previous consecutive 12-month period.

iii. The owner or operator shall, monthly, calculate and record the total VOC emissions from emission point E3 for the previous consecutive 12-month period.

iv. To demonstrate compliance with the VOC content requirements, the owner or operator shall, monthly, maintain records that show the quantity (in pounds) of specialty inks used during each calendar month and calculate the percentage of the total inks used that are classified as specialty inks as determined on a consecutive 12-month basis.

v. The owner or operator shall maintain a copy of the material safety data sheet (MSDS/SDS) for each VOC containing material used at this plant.

vi. The owner or operator shall determine the VOC content (as applied) of each batch of press-ready fountain solution by one of the following methods:

(1) The owner or operator shall determine the VOC content of each batch of press-ready fountain solution by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any deviation from the standard fountain solution makeup. Any manual additions of VOC made after each fountain solution batch is prepared shall be documented and the VOC content of the fountain solution shall be calculated to demonstrate compliance with the as applied fountain solution standard. Documentation of any deviations or manual additions shall include the date and time of occurrence.

(2) Alternatively, a sample of the fountain solution (as applied) may be taken from the fountain solution tray or reservoir and measured with a hydrometer, refractometer, or conductivity meter. Within 30 days after the effective date of this permit, the owner or operator shall establish the appropriate compliance indicator ranges for each of the analytical methods above that the source will use to demonstrate compliance with the fountain solution VOC content (as applied). Upon District approval of the established compliance indicator ranges, the owner or operator shall analyze the VOC content of each fresh batch of press ready fountain solution as prepared and after each addition of a VOC containing material to the fountain solution reservoir made following a fresh batch of fountain solution prepared. The owner or operator shall maintain daily records of the results of each observed reading including the date, time, and the name of the person who observed the reading.

vii. The owner or operator of a lithographic press using automatic cleaning equipment (e.g. blanket washers) that mixes the cleaning solution at the point of application and who must demonstrate the cleaning solution (as applied) complies with the VOC content requirements shall:

(1) Operate, maintain, and calibrate the automatic feed equipment to regulate the volume of each cleaning solvent and water (or other non-VOC) as mixed; and

(2) Preset the automatic feed equipment so that the consumption rates of the cleaning solvents and water (or other non-VOC), as-applied comply with the VOC content requirements.

viii. For each batch of blanket wash, roller wash, or other cleaning solution not prepared with automatic equipment, the VOC content of the cleaning solution (as applied) shall be determined by calculation. The calculation shall be kept in a batch log. The owner or operator shall document any additions of VOC or deviation from the standard cleaning solution makeup including the date and time of occurrence.

ix. See Plantwide emission unit.

S3. Reporting
[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. VOC

i. The owner or operator shall report the VOC emissions from emission point E2 for the previous consecutive 12-month period for each month.

ii. The owner or operator shall report the VOC emissions from emission point E3 for the previous consecutive 12-month period for each month.

iii. Identification of all periods of exceeding a VOC emission limit or standard specified, including the quantity of excess emissions. If no excess VOC emissions occur during a reporting period, the owner or operator shall submit a negative declaration.

iv. See Plantwide emission unit.

U2 Comments

1. The following table summarizes the compliance monitoring methods to reasonably assure compliance with District regulations and the terms and conditions of this permit:

Table 3 - Compliance Monitoring Methods

Pollutant	Monitoring	Record Keeping	Frequency
VOC	Raw material usage	Record the monthly usage or each VOC containing material	Monthly
	Emissions	Calculate and record the calendar month and rolling 12-month total VOC emissions	Monthly
	Fountain solution temperature	Record the temperature of each fountain solution reservoir	Daily
	Fountain solution VOC content	Determine VOC content (as applied) of each batch of fountain solution	As required
	Raw material VOC content	Maintain a copy of the MSDS for each VOC containing material used	Continuous

Emission Unit U3: Cutting presses and folder/gluers

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.09	Standards of Performance for Existing Process Operations	All
7.08	Standard of Performance for New Process Operations	All
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	All

Equipment[5, 6]

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E6	Embossing and cutting press, make BOBST, model SP-142 E, with a capacity of 9,000 sheets per hour. (Equipment ID: 34) (Insignificant Activity)	2005	7.08	N/A	N/A
E7	Embossing and cutting press, make Iberica, model 105 Speed K, with a capacity of 9,000 sheets per hour. (Equipment ID: 35) (Insignificant Activity)	2015	7.08	N/A	N/A
E8	Embossing and cutting press, make BOBST, model ExpertCut 106 LER, with a capacity of 9,000 sheets per hour. (Equipment ID: 36) (Insignificant Activity)	2011	7.08	N/A	N/A
E9	Embossing and cutting press, make BOBST, model ExpertCut 106 LER, with a capacity of 9,000 sheets per hour. (Equipment ID: 38) (Insignificant Activity)	2008	7.08	N/A	N/A

[5] The equipment list is updated per site visit performed on 6/13/2017. Emission point IDs are re-arranged to reflect the current equipment. The previously permitted Staude 2027 window gluer and two International Speed King straight line gluers have been removed from the facility. On 6/27/2017, the source submitted an application for two balers (E23 and E24) and a parts washer (E25). Since the PTE for the equipment are insignificant, they are incorporated into the FEDOOP permit. A construction permit is not required.

[6] Any equipment that has insignificant potential emissions (any criteria pollutant less than 5 tpy, any HAP less than 1,000 lbs/yr) is an insignificant activity (IA) and is also listed in the table of Insignificant Activities.

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E10	Embossing and cutting press, make BOBST, model SP-142 CER, with a capacity of 9,000 sheets per hour. (Equipment ID: 39) (Insignificant Activity)	2005	7.08	N/A	N/A
E11	Straight line folder/gluer, make Heidelberger, model Diana X115 (Equipment ID: 41) (Insignificant Activity)	2006	7.08, 7.25	N/A	N/A
E12	Straight line folder/gluer, make Signature, model Select 110 (Equipment ID: 46) (Insignificant Activity)	2006	7.08, 7.25	N/A	N/A
E13	Straight line folder/gluer, make Signature, model Select 110 (Equipment ID: 47) (Insignificant Activity)	2006	7.08, 7.25	N/A	N/A
E14	Straight line folder/gluer, make Signature, model Select 110 (Equipment ID: 48) (Insignificant Activity)	2006	7.08, 7.25	N/A	N/A
E15	Straight line folder/gluer, make Signature, model Select 110 (Equipment ID: 49) (Insignificant Activity)	2006	7.08, 7.25	N/A	N/A
E16	Window gluer, make Heiber Schroder, model WP14/D (Equipment ID: 50) (Insignificant Activity)	2006	7.08, 7.25	N/A	N/A
E17	Process cyclone, make Ohio Blow Pipe, model 42, used to collect paper scrap from cutting presses and feed the balers (Insignificant Activity)	1973	6.09	N/A	N/A
E18	Process cyclone, make Ohio Blow Pipe, model 42, used to collect paper scrap from cutting presses and feed the balers (Insignificant Activity)	1973	6.09	N/A	N/A
E19	Process cyclone, make Ohio Blow Pipe, model 42, used to collect paper scrap from cutting presses and feed the balers (Insignificant Activity)	1973	6.09	N/A	N/A
E20	Baler, make Maren (Insignificant Activity)	1973	6.09	N/A	N/A

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E21	Baler, make Maren (Insignificant Activity)	1973	6.09	N/A	N/A
E22	Baler, make Maren (Insignificant Activity)	1973	6.09	N/A	N/A
E23	Baler, make The American Baler Co., model 6042H930 (Insignificant Activity)	2005	7.08	N/A	N/A
E24	Baler, make The American Baler Co., model 6042H930, controlled by bag filters (Insignificant Activity)	2005	7.08	C1	N/A

Control Devices

Control ID	Description	Control Efficiency
C1	Bag filters (vent inside)	98%[7]

[7] This is the District pre-approved control efficiency for bag filters.

U3 Specific Conditions

S1. Standards

[Regulation 2.17, section 5.1]

a. Opacity

i. The owner or operator shall not cause or permit the discharge of emissions equal to or in excess 20% opacity. [Regulation 6.09, section 3.1] [Regulation 7.08, section 3.1.1]

b. PM

i. For emission points E17, E18, E19, E20, E21, and E22, the owner or operator shall not allow PM emissions to exceed 2.58 lb/hr per each piece of equipment based on actual operating hours in a calendar day. [8] [Regulation 6.09, section 3.2]

ii. For emission points E6, E7, E8, E9, E10, E11, E12, E13, E14, E15, E16, E23, and E24, the owner or operator shall not allow PM emissions to exceed 2.34 lb/hr per each piece of equipment based on actual operating hours in a calendar day. [8] [Regulation 7.08, section 3.1.2]

c. VOC

i. For emission point E11, E12, E13, E14, E15, and E16:

(1) The owner or operator shall not allow or cause plantwide VOC emissions, including all coatings, additives, catalysts, solvents, thinners, and cleaners from all affected facilities subject to Regulation 7.25 to equal or exceed 5 tons during any 12 consecutive month period, unless a BACT is submitted and approved by the District.[9] [Regulation 7.25, section 2.1 and 3.1]

[8] A one-time compliance demonstration has been performed for each piece of equipment for PM, and the lb/hr standards cannot be exceeded uncontrolled.

[9] The 5 tons per year only applies to E11 through E16 under unit E3 since the lithographic presses E1-E4 already have their BACT limits. It has been demonstrated that the potential VOC emissions for E11-E16 cannot exceed the 5 tons per year standard uncontrolled.

S2. Monitoring and Record Keeping

[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. Opacity

i. There are no monitoring and record keeping requirements for this equipment with respect to Opacity.[10]

b. PM

i. There are no monitoring and record keeping requirements for this equipment with respect to PM.

c. VOC

i. For emission point E11, E12, E13, E14, E15, and E16:

(1) The owner or operator shall maintain a copy of the material safety data sheet (MSDS/SDS) for each VOC containing material used at this plant.

(2) See Plantwide Emission unit.

S3. Reporting

[Regulation 2.17, section 5.2]

The owner or operator shall report the following information, as required by General Condition G12:

a. Opacity

i. There are no reporting requirements for this equipment.

b. PM

i. There are no reporting requirements for this equipment.

c. VOC

i. For emission point E11, E12, E13, E14, E15, and E16:

(1) See Plantwide emission unit.

[10] The District has determined that it is not necessary for opacity monitoring and record keeping for insignificant activities.

Insignificant Activities

Equipment	Qty.	PTE (ton/yr)	Regulation Basis
Embossing and cutting press (E6, E7, E8, E9, E10) (See Emission Unit U3)	5	0.44 PM_{10}	Regulation 2.16, section 1.23
Straight line folder/gluer (E11, E12, E13, E14, E15) (See Emission Unit U3)	5	1.94 VOC	Regulation 2.16, section 1.23
Window gluer (E16) (See Emission Unit U3)	1	1.14 VOC	Regulation 2.16, section 1.23
Process cyclone (E17, E18, E19) (See Emission Unit U3)	3	0.44 PM_{10}	Regulation 2.16, section 1.23
Baler (E20, E21, E22, E23, E24) (See Emission Unit U3)	5	0.44 PM_{10}	Regulation 2.16, section 1.23
Parts washer (See Emission Unit IA1)	1	0.70 VOC	Regulation 1.02, Appendix A

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

Equipment Not Regulated[11]

Emission Point	Description
1	Embossing and cutting press, make YOCO, model JY-85
2	Straight line folder/gluer, make Dorner, model 2200
3	Straight line folder/gluer, make Jason BERG, model Diana 115

[11] Equipment listed are installed but not operational.

Emission Unit IA1: Cold solvent parts washer[12]

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.18	Standard of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E25	One (1) cold solvent metal parts washer with a secondary reservoir, make Safety Kleen, model 52	2005	6.18	N/A	Fugitive

Control Devices

There are no control devices associated with this equipment.

[12] The parts washers under this unit meet the definition of insignificant activities per Regulation 2.16, section 1.23. However, Regulation 6.18 applies to each cold cleaner that use VOC to remove soluble impurities from metal surfaces. These parts washers shall meet the requirements under Regulation 6.18.

IA1 Specific Conditions

S1. Standards
[Regulation 2.17, section 5.1]

a. VOC

i. The owner or operator shall install, maintain, and operate the control equipment as follows: [Regulation 6.18, section 4]

(1) The cold cleaner shall be equipped with a tightly fitting cover that is free of cracks, holes, or other defects. If the solvent is agitated or heated, then the cover shall be designed so that it can be easily operated with 1 hand. [Regulation 6.18, section 4.1.1]

(2) The cold cleaner shall be equipped with a drainage facility that is designed so that the solvent that drains off parts removed from the cleaner will return to the cold cleaner. The drainage facility may be external if the District determines that an internal type cannot fit into the cleaning system. [Regulation 6.18, section 4.1.2]

(3) A permanent, conspicuous label summarizing the Operating Requirements specified in section 4.2 of this Regulation shall be installed on or near the cold cleaner. [Regulation 6.18, section 4.1.3]

(4) If used, the solvent spray shall be a fluid stream, not a fine, atomized, or shower type spray, at a pressure that does not cause excessive splashing. Flushing of parts using a flexible hose or other flushing device shall be performed only within the freeboard area of the cold cleaner. Solvent flow shall be directed downward to avoid turbulence at the air-solvent interface and to prevent solvent from splashing outside of the cold cleaner.
[Regulation 6.18, section 4.1.4]

(5) Work area fans shall be located and positioned so that they do not blow across the opening of the cold cleaner.
[Regulation 6.18, section 4.1.6]

(6) The solvent-containing portion of the cold cleaner shall be free of all liquid leaks. Auxiliary cold cleaner equipment such as pumps, water separators, steam traps, or distillation units shall not have any visible liquid leaks, visible tears, or cracks.
[Regulation 6.18, section 4.1.8]

ii. The owner or operator shall observe at all times the following operating requirements: [Regulation 6.18, section 4.2]

(1) Waste solvent shall neither be disposed of nor transferred to another party in a manner such that more than 20% by weight of the waste solvent can evaporate. Waste solvent shall be stored only in a covered container. A covered container may contain a device that allows pressure relief, but does not allow liquid solvent to drain from the container. [Regulation 6.18, section 4.2.1]

(2) The solvent level in the cold cleaner shall not exceed the fill line. [Regulation 6.18, section 4.2.2]

(3) The cold cleaner cover shall be closed whenever a part is not being handled in the cold cleaner. [Regulation 6.18, section 4.2.3]

(4) Parts to be cleaned shall be racked or placed into the cold cleaner in a manner that will minimize drag-out losses.
[Regulation 6.18, section 4.2.4]

(5) Cleaned parts shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping, or rotating, the parts shall be positioned so that the solvent drains directly back to the cold cleaner.
[Regulation 6.18, section 4.2.5]

(6) A spill during solvent transfer shall be cleaned immediately, and the wipe rags or other sorbent material shall be immediately stored in a covered container for disposal or recycling, unless enclosed storage of these items is not allowed by fire protection authorities. [Regulation 6.18, section 4.2.6]

(7) Sponges, fabric, wood, leather, paper products, and other absorbent material shall not be cleaned in a cold cleaner.
[Regulation 6.18, section 4.2.7]

iii. The owner or operator shall not operate a cold cleaner using a solvent with a vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F). [Regulation 6.18, section 4.3.2]

S2. Monitoring and Record Keeping
[Regulation 2.17, section 5.2]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. VOC

i. The owner or operator shall maintain records that include the following for each purchase: [Regulation 6.18, section 4.4.2]

(1) The name and address of the solvent supplier,

(2) The date of the purchase,

(3) The type of the solvent, and

(4) The vapor pressure of the solvent measured in mm Hg at 20ºC (68ºF).

ii. All records required in Specific Condition iS2.a.i shall be retained for 5 years and made available to the District upon request.
[Regulation 6.18, section 4.4.3]

S3. Reporting
[Regulation 2.17, section 5.2]

The owner or operator shall report in accordance with General Condition G12.

Attachment A – Default Emission Factors, Calculation Methodologies, & Stack Tests

Generally, emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and accounting for any control devices unless otherwise approved in writing by the District.

Table 3 – Calculation Methods and Emission Factors

Unit ID	Emission Point ID	Equipment Description	Pollutant	Calculation Methods	Emission Factor, Uncontr.	Control Efficiency	Emission Factor, Contr.	Unit
U1	E1, E4	Litho press	VOC, HAP	Mass balance method, see Note 1.				
U2	E2, E3	Litho press						
U3	E6-E10	Cutting press	$PM/PM_{10}/PM_{2.5}$	Engineer Judgment	0.001	N/A	N/A	lb/lb scrap
	E11-E16	Folder/gluer	VOC	Mass balance method based on glue used				
	E17-E19	Process cyclone	$PM/PM_{10}/PM_{2.5}$	Engineer Judgment	0.001	N/A	N/A	lb/lb scrap
	E20-E23	Baler	$PM/PM_{10}/PM_{2.5}$	Engineer Judgment	0.001	N/A	N/A	lb/lb scrap
	E24	Baler	$PM/PM_{10}/PM_{2.5}$	Engineer Judgment	0.001	95%	0.00005	lb/lb scrap
IA1	E25	Parts washer	VOC, HAP	Mass balance method based on cleaner used				

Note 1:

The VOC and HAP emissions from off-set lithography sheet-fed presses can be calculated according to the following methodology:

$$E_{VOC} = (I_{VOC})(I_{Ret}) + (FS_{VOC}) + (BW_{VOC}) + (RW_{VOC}) + (C_{VOC}) + (CS_{VOC})(R)$$

E_{VOC} = lb VOC Emissions
I_{VOC} = lb of sheet-fed ink used × weight % VOC in each ink
I_{Ret} = 0.1 (1 – Ink oil retention factor of 0.9 for non-heatset inks)
FS_{VOC} = Fountain solution used (gallons) × VOC content of fountain solution as applied (lb/gal)
BW_{VOC} = Blanket wash used (gallons) × VOC content of blanket wash as applied (lb/gal)
RW_{VOC} = Roller wash used (gallons) × VOC content of roller wash as applied (lb/gal)
C_{VOC} = Coatings used (gallons) × VOC content of coating as applied (lb/gal)
CS_{VOC} = Cleanup solvent used (gallons) × VOC content as applied (lb/gal)
R = 1.0 or 0.50 (Fraction of cleanup solvent unrecovered)

An "R" factor of 0.50 (50 percent VOC credit) may be used for solvents (vapor pressure ≤ 5 mmHg at 68°F) used to manually clean press components if the rags/wipes used to manually clean press components are stored in closed/sealed containers immediately after use and the company can document the quantity of solvent recovered.

This equation is also used for HAP emissions calculation.

Note 2:

The $PM/PM_{2.5}/PM_{10}$ emissions from emission unit U3 can be calculated according to the following methodology:

$$E_{PM} = (T)(EF)$$

E_{PM} = ton PM Emissions
T = throughput, ton/yr
EF = Emission factor, 0.1% per engineering judgement

Fee Comment

1. The company is required to pay annual fees.